

Remarks

The Office Action dated 08/07/2007 recorded the following status of claims in this application. Claims 1 - 18 were pending in the application. Claims 1 - 18 were rejected. This amendment cancels Claims 11 and 18, amends Claims 1, 12, and 15 - 17, and submits a new Claims 19 - 21. The Applicant reserves the right to file the canceled claims in one or more divisional or continuation applications, or to reintroduce the cancelled claims under a future amendment to this application. Reconsideration of this application is requested in view of these changes and the remarks presented below.

Claims

Claim 1 is amended to add a bottom sheet as an element and to further specify that the recited elements are configured as a load bearing element. The addition of the bottom sheet was originally specified in dependent claim 11, which is now cancelled. The specification at page 2, lines 24 – 25 specifies that, “The assembly may also comprise a bottom sheet to create a load bearing structure...” Hence no new matter is entered with this amendment of Claim 1.

Claim 12 is amended to change “the visual display means” to “the visual display.” This change conforms the terminology for the referenced element in claim 12 to the same terms used in the independent claim 1, in order to establish the proper antecedent basis for the element in claim 12. No new matter is entered by this amendment to conform the disparate terms.

Claims 15 – 17 are amended to change “lens means” to “lens.” This change is supported in the specification at numerous places, such as at page 2, lines 20 – 21, where it is stated, “...a lens may be provided in each cell to capture substantially all of the light from the pixel.” Hence no new matter is entered with these amendments.

New dependent claim 19 incorporates much of the substance of original independent claim 18 (which is now cancelled) as a further limitation of independent claim 17. Hence no new matter is entered with this new dependent claim 19.

New independent claim 20 is added. Claim 20 provides an array of cells comprising tubes with walls, wherein the walls of the tubes are provided with a surface treatment to increase their reflectivity. This feature is disclosed at page 2, lines 7 -8 in combination with page 2, lines

17 – 18, so no new matter is entered with this new independent claim 20. In the Office Action dated 8/7/07, the Examiner suggested that the application of a surface treatment to increase reflectivity is anticipated by French Patent No. FR 2,563,929 (Thery). However, the Applicant respectfully disagrees, as discussed below in regard to the rejection of claim 8 under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 5,819,454 (Rosenitsch) in view of French Patent No. FR 2,563,929 A (Thery). Furthermore, new claim 20 specifies that the array of cells comprises tubes, a further distinction from Thery.

New independent claim 21 is added. Claim 21 provides an array of cells wherein each cell is formed as a light guide. This feature is disclosed in the Applicant's specification at page 7, lines 5 – 9 so no new matter is entered with this new independent claim. In the Office Action dated 8/7/07 the Examiner suggested that incorporation of a light guide is anticipated by US Patent No. 4,754,202 (Havel). However, the applicant respectfully disagrees, as discussed below with regard to the rejection of claim 7 under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 5,819,454 (Rosenitsch) in view of US Patent No. 4,754,202 (Havel). Furthermore, new claim 21 specifies that each cell is formed as a light guide, a further distinction from Havel.

Claim Rejections – 35 U.S.C. §102(b) – [US Patent No. 5,819,454 - Rosenitsch]

Claims 1 – 3, 5, 9, 11 – 15, 17 and 18 were rejected under 35 U.S.C. 102(b) as being anticipated by US Patent No. 5,819,454 (Rosenitsch). Claim 1 has been amended to incorporate a bottom sheet and to specify that “the array of cells, the cover sheet and the bottom sheet are configured as a load bearing element.” ...In the Applicant's specification at page 5, lines 28 - 32 the applicant characterizes a load bearing element as “allowing the unit to be used to create or form part of a floor or wall structure.” In contrast, in Col. 1, lines 32 – 35 Rosenitsch states that “the particular object of [his] invention [is] to provide a display device whose thickness is reduced in comparison to the know display devices....” The Applicant respectfully asserts that Rosenitsch's device is not configured to be a load bearing element, and there is no indication in Rosenitsch that such a property would be desirable. In view of these distinctions, the Applicant respectfully asserts that Claim 1 as currently amended is distinguished over Rosenitsch, and the Applicant requests that the rejection of Claim 1 as being anticipated by Rosenitsch be withdrawn, and that Claim 1 be allowed.

Claim 2 specifies that the Applicant's claimed cells are contiguous. The Applicant respectfully asserts that the contiguous cells as part of a load bearing element (as established by the currently amended independent Claim 1 from which Claim 3 depends) distinguishes Claim 2 over Rosenitsch, and the Applicant requests that the rejection of Claim 2 as being anticipated by Rosenitsch be withdrawn, and that Claim 2 be allowed.

Claim 3 specifies that each cell comprises a tube open at each end. The Applicant respectfully asserts that Rosenitsch's cell configuration would not reasonably be interpreted to be tubes. In view of this distinction, and distinctions established with respect to the currently amended independent Claim 1 from which Claim 3 depends, the Applicant respectfully asserts that Claim 3 is distinguished over Rosenitsch, and the Applicant requests that the rejection of Claim 3 as being anticipated by Rosenitsch be withdrawn, and that Claim 3 be allowed.

Claim 5 specifies that the array comprises a mesh with substantially square apertures. The Applicant respectfully asserts that the features in Rosenitsch's that correspond to the Applicant's apertures are triangular. In view of this distinction, and distinctions established with respect to the currently amended independent Claim 1 from which Claim 5 depends, the Applicant respectfully asserts that Claim 5 is distinguished over Rosenitsch, and the Applicant requests that the rejection of Claim 5 as being anticipated by Rosenitsch be withdrawn, and that Claim 5 be allowed.

Claim 9 specifies that the assembly further comprises a lens in each cell. The Applicant respectfully asserts that a lens as specified by this dependent Claim 9 in combination with the load bearing characteristic of Claim 1 from which Claim 9 depends is distinguished over Rosenitsch, and the Applicant requests that the rejection of Claim 9 as being anticipated by Rosenitsch be withdrawn, and that Claim 9 be allowed.

Claim 11 has been cancelled.

Claim 12 specifies that the cover sheet provides weather proofing to the visual display. Rosenitsch does not characterize his plurality of diffusing plates in this manner. The Examiner notes that Rosenitsch discloses a configuration "for preventing transitional emission of radiation." However, the Applicant notes that Rosenitsch further describes this configuration as

incorporating “light-proof webs” and the spaces between Rosenitsch’s elements 6 and 4 and while this configuration may prevent light emission from one cell into an adjoining cell, it might not provide weather proofing. In view of this distinction, and distinctions established with respect to the currently amended independent Claim 1 from which Claim 12 depends, the Applicant respectfully asserts that Claim 12 is distinguished over Rosenitsch, and the Applicant requests that the rejection of Claim 12 as being anticipated by Rosenitsch be withdrawn, and that Claim 12 be allowed.

Claim 13 specifies that the cover sheet is shaped to form a lens aligned with each cell of the array. Rosenitsch utilizes a plurality of diffusing plates as lenses. In view of this distinction, and distinctions established with respect to the currently amended independent Claim 1 from which Claim 12 depends, the Applicant respectfully asserts that Claim 12 is distinguished over Rosenitsch, and the Applicant requests that the rejection of Claim 12 as being anticipated by Rosenitsch be withdrawn, and that Claim 12 be allowed.

Claim 14 specifies that the cover sheet is provided with a surface treatment to improve the optical performance. The Applicant respectfully asserts that this feature in combination with distinctions established with respect to the currently amended independent Claim 1 from which Claim 14 depends distinguishes Claim 14 over Rosenitsch, and the Applicant requests that the rejection of Claim 14 as being anticipated by Rosenitsch be withdrawn, and that Claim 14 be allowed.

Claim 15 adds a lens that is arranged between the array of cells and the cover sheet, and that is aligned with the walls of the cells, and that is operable to diffuse light between adjacent cells. In contrast, as noted in the discussion of Claim 12, the Applicant asserts that Rosenitsch’s apparatus is configured to prevent diffusion of light between cells. In view of this distinction, and distinctions established with respect to the currently amended independent Claim 1 from which Claim 15 depends, the Applicant respectfully asserts that Claim 15 is distinguished over Rosenitsch, and the Applicant requests that the rejection of Claim 15 as being anticipated by Rosenitsch be withdrawn, and that Claim 15 be allowed.

Claim 17 has been amended to specify that the visual display system is configured as a load bearing element. For reasons analogous to those presented with regard to currently

amended Claim 1, the Applicant respectfully asserts that Claim 17 as currently amended is distinguished over Rosenitsch, and the Applicant requests that the rejection of Claim 1 as being anticipated by Rosenitsch be withdrawn, and that Claim 17 be allowed.

Claim 18 has been cancelled.

New Claim 19 has been added, specifying that the pixels of Claim 17 include a plurality of discrete light sources that are arranged in a plurality of rows, and that the light sources in each row are offset with respect to the light source in each adjacent row. The Applicant respectfully asserts that this configuration in combination with distinctions established with respect to the currently amended independent Claim 17 from which Claim 19 depends distinguishes Claim 19 over Rosenitsch, and the Applicant requests that the rejection of Claim 19 as being anticipated by Rosenitsch be withdrawn, and that Claim 14 be allowed.

Claim Rejections – 35 U.S.C. §103(a) – [US Patent No. 5,819,454 (Rosenitsch) in view of US Patent No. 4,754,202 (Havel)]

Claim 7 was rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 5,819,454 (Rosenitsch) in view of US Patent No. 4,754,202 (Havel). Claim 7 specifies that each cell defined in Claim 1 incorporates a light guide. The Applicant at page 7, lines 7 & 8, describes a light guide as an element “which allows substantially all the incident light to pass through with out reflection.” The Examiner states that, “Havel discloses a display panel (Figure 7) including an array of cells 23 each cell including a light guide 26 (Figure 7, column 4, lines 34-37). The Applicant notes that Havel describes his element 26 as “light scattering material,” and respectfully asserts that light scattering material is not equivalent to a light guide which allows substantially all the incident light to pass through with out reflection. Further, as previously noted, Claim 1 has been amended to incorporate a bottom sheet and to specify that “the array of cells, the cover sheet and the bottom sheet are configured as a load bearing element.” The Applicant respectfully asserts that there is no indication that Havel’s array is configured to be a load bearing element, and there is no indication in Havel that such a property would be desirable. In view of these distinctions the Applicant respectfully asserts that Claim 7 is not rendered obvious by Rosenitsch in view of Havel, and the Applicant requests that the

rejection of Claim 7 as being obvious from Rosenitsch in view of Havel be withdrawn, and that Claim 7 be allowed.

Claim Rejections – 35 U.S.C. §103(a) – [US Patent No. 5,819,454 (Rosenitsch) in view of French Patent No. FR 2,563,929 (Thery)]

Claims 4, 6 and 8 were rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 5,819,454 (Rosenitsch) in view of French Patent No. FR 2,563,929 A (Thery).

Claim 4 specifies that the array of cells of Claim 1 incorporates a honeycomb mesh that creates adjacent hexagonal cells. As previously noted, Claim 1 has been amended to incorporate a bottom sheet and to specify that “the array of cells, the cover sheet and the bottom sheet are configured as a load bearing element.” While Thery’s patent was not translated into English, in a quick scan of the French publication by the Applicant’s representative did not find an indication that Thery’s array is configured to be a load bearing element. In view of this shortcoming and the same shortcoming in Rosenitsch, the Applicant respectfully asserts that Claim 4 is not rendered obvious by Rosenitsch in view of Havel, and the Applicant requests that the rejection of Claim 4 as being obvious from Rosenitsch in view of Havel be withdrawn, and that Claim 4 be allowed.

Claim 6 specifies that each cell includes a parabolic reflector having an opening in the centre of the base for alignment with pixel. The Applicant respectfully asserts that this configuration in combination with distinctions established with respect to the currently amended independent Claim 1 from which Claim 6 depends distinguishes Claim 6 over Rosenitsch in view of Thery, and the Applicant requests that the rejection of Claim 6 as being rendered obvious by Rosenitsch in view of Thery be withdrawn, and that Claim 6 be allowed.

Claim 8 specifies that the walls of the cells are provided with a surface treatment to increase their reflectivity. The Examiner states that, “Thery discloses a display panel 1 (Figures 2 and 3, English translated abstract) including an array of reflective, hexagonal cells 2, each of the reflective cells provided with surface treatment - coated with reflective material.” However the Applicant notes that in his abstract Thery describes his cells as “reflecting areas 2 created in the mass of the support 3....” When lines 20 – 23 of page 3 of Thery are translated to

English by machine translation the result is, “In addition in the mass of support 3, on its external face 6, of the zones of reflexion 2 are created in order to reflect the light emitted by the lighting part 8 of the diode 4”çeci from the zone of reflexion 2 towards the observer placed opposite the luminous panel. The Applicant asserts that reflecting areas (or “zones of reflection” created in the mass of a support are not equivalent to cells provided with a surface treatment to increase their reflectivity. A surface treatment to increase reflectivity is a further component of a cell beyond a reflecting area created in the mass of a support. The Applicant respectfully asserts that this distinction in combination with distinctions established with respect to the currently amended independent Claim 1 from which Claim 8 depends distinguishes Claim 8 over Rosenitsch in view of Thery, and the Applicant requests that the rejection of Claim 8 as being rendered obvious by Rosenitsch in view of Thery be withdrawn, and that Claim 8 be allowed.

Claim Rejections – 35 U.S.C. §103(a) – [US Patent No. 5,819,454 (Rosenitsch) in view of German Patent No. DE 10006164 A1 (Heidelberger)]

Claim 10 was rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 5,819,454 (Rosenitsch) in view of German Patent No. DE 10006164 A1(Heidelberger). Claim 10 adds the further limitation that the cover sheet of Claim 1 comprises glass or plastic. As previously noted, Claim 1 has been amended to incorporate a bottom sheet and to specify that “the array of cells, the cover sheet and the bottom sheet are configured as a load bearing element.” While Heidelberger’s patent was not translated into English, in a quick scan of the German publication by the Applicant’s representative did not find an indication that Heidelberger’s array is configured to be a load bearing element. In view of this shortcoming and the same shortcoming in Rosenitsch, the Applicant respectfully asserts that Claim 10 is not rendered obvious by Rosenitsch in view of Heidelberger, and the Applicant requests that the rejection of Claim 10 as being obvious from Rosenitsch in view of Heidelberger be withdrawn, and that Claim 10 be allowed.

Claim Rejections – 35 U.S.C. §103(a) – [US Patent No. 5,819,454 (Rosenitsch) in view of German Patent No. US Patent 3,194,954 (Locke)]

Claim 16 was rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 5,819,454 (Rosenitsch) in view of US Patent No. 3,194,954 (Locke). Claim 16 provides that the

lens (of its parent claim, Claim 15) is provided by adhesive between the cells and the cover sheet. The specification at page 3, lines 4 – 6, further explains that, “The lens means may be in the form of adhesive used between the cells and the cover sheet.” The Examiner states that, “Locke discloses a display panel including: an array of cells 1 covered attached to a transparent cover 3 with an adhesive (Figures 1 and 2, column 1, lines 57 and 58).” However, the Applicant asserts that there is no indication that such adhesive is configured as a lens. In view of this distinction, the Applicant respectfully asserts that Claim 16 is not rendered obvious by Rosenitsch in view of Locke, and the Applicant requests that the rejection of Claim 16 as being obvious from Rosenitsch in view of Locke be withdrawn, and that Claim 16 be allowed.

Conclusion

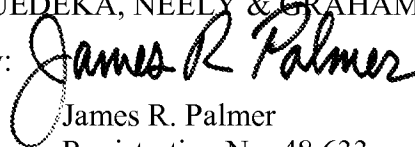
The Applicant has carefully reviewed the Examiner’s findings and believes that the claims have now been placed in a form requiring allowance, and such action is earnestly requested. If the Examiner believes that a telephone call would expedite the early disposition of this application, a call to the undersigned is respectfully requested.

In the event this response is not timely filed, Applicant(s) hereby petition for the appropriate extension of time and request that the fee for the extension along with any other fees which may be due with respect to this paper be charged to our Deposit Account No. 12-2355.

Respectfully submitted,

LUEDEKA, NEELY & GRAHAM, P.C.

By:



James R. Palmer

Registration No. 48,633

Date: 1 November 2007
P.O. Box 1871
Knoxville, Tennessee 37901
(865) 546-4305